

## CHAPTER 6:

# Living and Working at U.S. Antarctic Program Facilities

*U.S. Antarctic Program participants carry a refueling hose to a U.S. Coast Guard icebreaker.*



Photo by Kris Kuenning

The United States operates three year-round stations in Antarctica, two research vessels, and numerous summer seasonal field camps. This chapter discusses safety, health, and training considerations and then gives an overview of each facility, describing the key administrators, guidelines on waste management, and provides information about communications and mail service.

## SAFETY

U.S. Antarctic Program goals are to protect your safety and health through proactive management.

**Required Training.** Since much of your work in Antarctica will not be unique to that region, you are expected to use work practices that are consistent with U.S. occupational safety and health standards. For situations that present unusual or unique hazards because of Antarctica's extreme environment, you will be provided specific instruction (for example, how to act on sea ice or around airplanes).

**Injuries Are Preventable.** Injuries are caused by the unsafe actions of people and the existence of unsafe conditions. Most injuries are not mere chance occurrences, but represent a failure of safety systems. Effective utilization of proper safety procedures by each participant and maintenance of safe conditions will reduce injuries.

**Everyone Is Responsible For Preventing Injuries.** Safety and health performance is equal in importance to productivity, quality, and cost. The safest way is always the best way. Everyone is accountable for the safety performance practices of participants and for the maintenance of safe, healthy work conditions under his/her responsibility.

**All Operating Exposures Can Be Safeguarded.** Sources of hazards shall be controlled through careful planning, appropriate work procedures, training, inspections, and the



proper use of protective equipment and clothing.

**Safety Is a Condition of Participation.** Each USAP participant must accept responsibility for his/her personal safety and health, as well as that of fellow participants. Everyone is to conduct themselves in a safe manner, following policies, rules, procedures, and work practices. Supervisors shall assure compliance with these safety requirements by the participants they supervise.

**People Are Essential To The Success Of Safety.** Safety awareness is not instinctive; it must be developed through training, motivation, cooperation, and participation of every participant. People provide the solution to safety problems. Through participant commitment and team effort, injuries can be prevented and a safe, healthy workplace provided.

All participants in the line of authority will be responsible and accountable for the following:

- ▶ Ensure safe working conditions.
- ▶ Provide necessary personal protective equipment and enforce its required use.
- ▶ Properly maintain tools and equipment.
- ▶ Assign participants to jobs which they are physically and mentally capable of performing.
- ▶ Take immediate steps to correct any violation of safety rules observed or reported to them.
- ▶ Ensure that work under their supervision is done in a safe manner.
- ▶ Ensure that the workers understand the work to be carried out, hazards that may be encountered, and the proper procedures for doing the work safely.
- ▶ Ensure participants understand that compliance with safety procedures and requirements is an essential part of their job duties, and that violations are subject to disciplinary action.
- ▶ Enforce the procedures and requirements of all health and safety program

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The U.S. Antarctic Program operates in one of the most challenging environments on earth. The harsh climate and remoteness of Antarctica have represented serious safety and health hazards since the start of human activity in Antarctica. Yet, recent injuries and illnesses are seldom related to extreme environmental conditions. Common injuries include sprains and strains.

The National Science Foundation's goal is for each participant to enjoy a safe, healthful, and productive Antarctic experience. Everyone will be afforded the same high level of protection from health and safety hazards. Your observance of safety rules and practices at work and during recreational activities is critical to maintaining a safe environment for yourself and your fellow U.S. Antarctic Program participants. By reporting unsafe conditions to your supervisor or NSF management, you can help reduce the risk to all.

Thank you for your efforts in support of the U.S. Antarctic Program's mission of scientific research and discovery.

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**Incident Reporting.** Any participant involved in or witnessing an accident or incident must report it to their supervisor or manager as soon as possible (no matter how minor). Accident or incidents may include injuries, spills, near misses, or unsafe conditions. Incident investigations must be completed within 72 hours of occurrence. Access to the RPSC Incident Reporting forms may be gained through <https://shield.usap.gov> or may be accessed through the EH&S web page referenced above.

## Fire Safety

Fire is a **serious threat to life** in Antarctica. Shelter is critical to our survival and because of the dry and windy conditions, fires start easily and spread rapidly in Antarctica.

Most fires are caused by carelessness, poor housekeeping, or faulty electrical or mechanical operations. If precautions are taken to eliminate dangers in these areas, the threat of a disastrous fire can be greatly reduced.

All participants need to understand and obey fire prevention rules, become familiar with their surroundings, respond rapidly to any alarms, know and follow evacuation and muster plans, know how to locate and operate extinguishers, and understand how and where to report a fire.

## Field Safety Training (Survival School)

The U.S. Antarctic Program continually strives to improve safety. Part of this effort consists of field safety training which has several objectives:

1. To provide basic training in cold weather survival skills. Topics covered include cold weather camping, use of antarctic clothing, hypothermia and frostbite, snowcraft, mountaineering, working on sea ice, and other areas.
2. To enable field teams to use the actual equipment they will be using in the field. An opportunity for the project teams to set up and demonstrate the proper use of tents, stoves, radios, etc., pays obvious dividends.
3. To provide an opportunity for field team members to work together as a unit, perhaps for the first time, before going into the field. This is an excellent opportunity for the field team leader, as well as the individuals on the team, to learn the strengths and weaknesses of the team members.

Generally, anyone who may require overnight stays away from a station must complete training appropriate to his or her expected exposure, previous training, and experience. Some courses are tailored to the needs of each group. For example: instructions for parties spending their time in the Dry Valleys, groups working on sea ice, and groups traveling long distances by snowmobile.

The courses are not intended to develop advanced field skills (mountaineering, or traversing crevasse fields, for example) in the inexperienced person. Rather, they familiarize proficient people with specific situations they might encounter in the Antarctic. Leaders of remote field projects should select team members with wilderness survival skills and at least one safety guide to oversee activities.

Due to the nature of the instruction, there is some risk of injury. The instructors have full responsibility for conducting the program safely. Please follow their directions. People who enter the training area to observe are also the responsibility of the course instructors; failure to respond to directions given by course instructors will result in being asked to leave.

The *Field Manual for the U.S. Antarctic Program* located at [www.usap.gov](http://www.usap.gov) under the Travel and Deployment link provides information on field party preparation, safety training, transport safety, radio usage, weather, shelters, sea ice, glacier travel, rescue, etc. At least one copy is provided to each field science team.

## Safety

### The five most common injuries are...

- ▶ Sprains/Strains
- ▶ Contusions (bruises)
- ▶ Lacerations (cuts)
- ▶ Fractures
- ▶ To the eye

### If you do have an injury...

- ▶ Get immediate medical attention.
- ▶ Never hesitate or delay going to Medical for treatment.
- ▶ Report it promptly.
- ▶ You could be penalized for not reporting an injury or a near miss incident.
- ▶ We believe reporting and analyzing incidents, and acting on results, is the best way we can help prevent future incidents.
- ▶ Accidents or injuries caused by failure to follow safe work practices, procedures, or training could result in disciplinary action.

### If you have people working for you...

- ▶ You are responsible for fostering a safe work place.
- ▶ You must ensure your employees are properly trained, work safely, maintain safe conditions, and are aware.
- ▶ In the event of an injury or incident, you must complete an injury or incident investigation report, and take corrective action.
- ▶ The report must be filed the day of the injury.